

**THE EVANIIDÆ OF AMERICA NORTH OF MEXICO.\***

BY J. CHESTER BRADLEY.

In preparing this paper the writer has tried to collect, interpret and arrange what facts he could concerning this very important and much neglected family, both to satisfy his own interest, and to aid other students in their work. The material on which his decisions are based is chiefly contained in the collection of the American Entomological Society, where are all of Mr. Cresson's types, except those of *Aulacus abdominalis*, which appear to be lost.

He wishes to express his thanks to Rev. V. A. Huard, who very kindly secured l'Abbé Provancher's types from the Parliament Museum in Quebec and loaned them to him. Also to Mr. Henry L. Viereck who has given him valuable advice and suggestions. To Dr. A. D. Hopkins for specimens of *Aulacus abdominalis*. To Mr. Wm. H. Ashmead for valuable criticism and suggestions. To Mr. R. J. Weith and others. Mr. G. L. Sargent has drawn Figs. 7 and 8 of Plate XI for him.

The only important paper on the family hitherto published is Herr August Schletterer's excellent monograph in the Ann. d. k. k. Nat. Hofm. in Vienna, vol. iv, 1889, 3 parts and 6 plates. It is very exhaustive, but Herr Schletterer has failed to comprehend the true relations of the North American species, probably from lack of material, and according it is of little value to the student of the North American fauna.

The family was first recognized by Latreille in 1802 as "*Evani-ales*," and by Westwood as "*Evaniidæ*" in 1843. It is easily distinguished by the fact that the abdomen is attached by a petiole to the dorsal aspect of the propodeum, and never normally between the coxæ, and by the existence of a distinct costal cell in the fore wings. Mr. Ashmead in his "*Classification of the Ichneumonoidæ*" has recognized three subfamilies, quite correctly we think. They are readily separable by the following table: See Plate XI, Figs. 1, 2, 3, 4.

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\* This paper was commenced in the Entomological Student, vol. ii, p. 28, but the discontinuation of "The Student" prevented its completion. The first part is here republished and finished, thus enabling the author to make several necessary changes.

A. Antennæ inserted far above the clypeus, at about the middle of the face, front wings without more than one recurrent nervure.

1. Tibiæ normal. Abdomen attached by a slender petiole to the superior margin of the mesothoracic truncature, distant from the scutellum.

Subfamily I, EVANIINÆ.

2. Tibiæ clavate, much swollen at apex. Abdomen attached to the base of the propodeum, approximate to the scutellum.

Subfamily II, GASTERUPTIONINÆ.

B. Antennæ inserted just above the clypeus. Front wings usually with two recurrent nervures ..... Subfamily III, AULACINÆ.

### Subfamily III, AULACINÆ.

1840-42. *Aulaciæ* Shuckard, family. Newman's Entomologist, p. 121.

1887. *Aulacinæ* Cresson, subfamily. Synopsis Hymen. America, p. 36.

Medial thoracic lobe often gibbous and emarginate, always transverse striate. Front wings with two recurrent nervures, of which the second is generally partially obsolete. Hind wings with a median cell, except in *Pammegischia*. Tibiæ normal. Abdomen club shaped. Ovipositor exerted and long.

A marked sexual character exists in the hind coxæ, which are normal in the males, but in the females are sculptured on the inner surface with a groove at the base of which is a well marked tooth, and this in *Pammegischia* is greatly prolonged.

An available character for generic separation, first recognized by Kieffer,\* is to be found in the sculpture of the tarsal claws. The species of the genera thus defined are also united by other characters, so that they are truly natural groups.

The subfamily differs markedly in appearance and habits from the other two. The species, so far as known, are parasitic on the larvæ of Coleoptera. *Pammegischia xiphydrie* Ashm. has been bred from *Xiphydria provancheri*. There are five genera, all represented in America.

A. Posterior wings with a distinct median cell. Hind coxæ of the females not greatly prolonged within, but with a tooth on the inner margin.

1. Anterior margin of the prothorax more or less angled with a strong tooth at the angle. Tarsal claws with four teeth beneath.

**Deraïodontus** nov. gen.

2. Anterior margin of the prothorax rounded, without a tooth.

a. Tarsal claws with four teeth beneath **Pristaulacus** Kieffer.

b. Tarsal claws with three teeth beneath **Oleisoprister** nov. gen.

c. Tarsal claws with one tooth beneath.....**Aulacus** Jurine.

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\* Ann. Soc. Ent. Fr., lxvii, p. 813, 1899.

- B. Posterior wings without nervures, except the costal and a trace of the anal.  
Hind coxæ of the females greatly prolonged within. Tarsal claws  
with no teeth.....**Pammegischia** Provancher.

### **DERAIDONTUS** nov. gen.

Head subquadrate, antennæ inserted just above the clypeus; prothorax with an acute tooth on the somewhat angled margin; mesothorax with the medial lobe often gibbous, always rugose; wings often with more or less fuscous on the basal half, as well as below the stigma; the ungula bear four well-defined teeth beneath; abdomen clavate; ovipositor strongly exerted.

Type (*Aulacus*) *montanus* Cresson.

Medial mesothoracic lobe strongly gibbous.

Wings hyaline, without violaceous reflection; abdomen black, except the ventral part of the first segment, which is sometimes dull rufous:

**niger** Shuckard.

Wings of the ♀ showing strong violaceous reflection; abdomen rufous, marked with black.....**montanus** Cresson.

Medial mesothoracic lobe not gibbous.

Wings showing strong violaceous reflection; much fuscous present in the basal portion; legs black; petiole short.....**fuscatus** nov. spec.

Wings without violaceous reflection, or more than a trace of fuscous in the basal portion; legs flavous; petiole long....**flavicornis** nov. spec.

### **Deraiodontus niger** Shuckard.

1841. *Aulacus niger* ♀ Shuckard, Entomologist, p. 124.

1841. *Aulacus ater* ♀ Westwood, Ann. and Magazine Nat. Hist., vii, p. 538.

1901. *Pristaulacus niger* Ashmead, Ent. News, xii, p. 278.

♀ ♂.—Black; sparingly pubescent; face finely punctulate, pubescent; vertex more sparingly punctulate; antennæ black, 12 mm. long; medial mesothoracic lobe gibbous, emarginate, rugose; wings hyaline, with a very faint trace of fuscous beneath the stigma and in the median cell; legs black, tending to castaneous; abdomen entirely black, or more usually with a deep red band on the ventral part of the first segment; ovipositor 17 mm. long. Length 14 mm.

*Habitat*.—Massachusetts.

### **Deraiodontus montanus** Cresson.

1879. *Aulacus montanus* Cresson, ♀, Trans. Am. Ent. Soc., vii, p. 256.

1901. *Pristaulacus montanus* Ashmead, Ent. News, xii, p. 278.

♀.—Black; sparingly pubescent; face and vertex smooth; face pubescent; antennæ black, 10 mm. long; mesothorax with the medial lobe gibbous and emarginate, rugose; wings hyaline or slightly yellow, showing strong violaceous reflection; a quadrate fuscous spot beneath the stigma; a trace of fuscous often in the median cell and along the transverse medial nervure; legs black; abdomen ferruginous, posterior segments and petiole black; ovipositor 13-14 mm. long. Length 11-14 mm.

♂.—Here first described. Differs only in having less fuscous and no violaceous reflection on the wing.

*Habitat*.—Nevada, Washington.

Types in the collection of the American Entomological Society.

***Deraiodontus fuscatus* nov. spec.**

♀.—Black; face punctate, vertex polished, shiny; antennæ black, 7 mm. long; mesothorax not gibbous, very broadly, not deeply emarginate, rugose; wings hyaline, with strong violaceous reflection; a fuscous spot extending below the stigma to the subdiscoidal nervure; the costal cell fuscous, and a fuscous band from the basal half of the median cell to the apex of the second discoidal, where it joins with a fuscous band running the entire length of the anal nervure; legs and feet black; petiole short, black above; the abdomen entirely red; ovipositor very short, 7.5 mm. Length 10 mm.

*Habitat*.—Washington, one specimen.

Type in the collection of the American Entomological Society.

***Deraiodontus flavicrus* nov. spec.**

♀.—Black; sparingly pubescent; face and vertex smooth, shiny; medial mesothoracic lobe not gibbous, but emarginate; wings hyaline, without violaceous reflection, a quadrate fuscous spot beneath the stigma, and the apex of the anterior wings fuscous; a trace of fuscous in the median cell and along the transverse medial and second recurrent nervures; legs flavous, hind coxæ black, hind femora castaneous; abdomen with a very long petiole, rufous, posterior segments and petiole above black, 6 mm. long; ovipositor 11 mm. long. Length 11 mm.

*Habitat*.—Virginia, one specimen.

Type in the collection of the American Entomological Society.

**PRISTAULACUS** Kieffer.

1899. *Pristaulacus* Kieffer, Ann. Soc. Ent. Fr., lxxvii, p. 813.

The anterior margin of the prothorax rounded, without an acute tooth; first transverse cubitus interstitial with or close to the first recurrent nervure; tarsal claws with four teeth beneath, the fourth one very small and blunt. See Plate XI, Fig. 7.

Thorax decidedly gibbous (in *pacificus* but slightly).

Wings showing a strong violaceous reflection . . . . .**occidentalis** Cresson.

Wings showing slight violaceous reflection; fuscous spot beneath stigma present in both ♂ and ♀; legs yellow . . . . .**melleus** Cresson.

Wings showing no violaceous reflection; fuscous spot beneath stigma almost obliterated in male . . . . .**pacificus** Cresson.

Thorax not gibbous.

Wings violaceous, with a yellow hyaline band beneath the stigma.

**fasciatus** Say.

***Pristaulacus occidentalis* Cresson.**

1879. *Aulacus occidentalis* Cresson, ♀, Trans. Am. Ent. Soc., vii, p. 255.

1886. *Aulacus abbottii* Schletterer, Ann. d. k. k. Nath. Hofm. Wien., iv, p. 539.

1901. *Pristaulacus occidentalis* Ashmead, Ent. News, xii, p. 278.

♀.—Black or ferruginous; face and vertex black, punctate; mandibles and edge of labrum ferruginous; antennæ black, 10–11.5 mm. long; scape ferruginous beneath; medial mesothoracic lobe strongly gibbous, emarginate, transverse rugose; body but sparingly pubescent; wings stained yellowish, and showing a brilliant violaceous reflection; a fuscous spot beneath the stigma and at the apex of anterior wings; legs ferruginous, tarsi paler, coxæ and trochanters black; petiole distinct, ferruginous, with a narrow black stripe above and below; abdomen robust, ferruginous, terminal segments dusky or black. Length of abdomen 5–7 mm. Ovipositor 13–15 mm. Body 11–15 mm.

♂.—Differs from the female only in being slightly more pubescent, wings less fuscous, but showing the same brilliant violaceous reflection, the abdomen ringed with black on several segments, the coxæ, trochanters, face and entire scape more or less ferruginous.

*Habitat*.—Colorado, Nevada, Washington.

Types in collection American Entomological Society.

Described by Cresson from 15 females. Besides these the author has examined 11 females and 4 males from Washington. The male is here described for the first time. The violaceous reflection is characteristic, but the color varies, through all stages from black to ferruginous. The flagellum is always dark.

### ***Pristaulacus melleus* Cresson.**

1879. *Aulacus melleus* Cresson, ♀, Trans. Am. Ent. Soc., vii, p. 255.

1879. *Aulacus consors* Cresson, ♂, Trans. Am. Ent. Soc., vii, p. 255.

1901. *Pristaulacus consors* Ashmead, Ent. News, xii, p. 278.

1901. *Pristaulacus melleus* Ashmead, Ent. News, xii, p. 278.

♀.—Pale ferruginous, face rough, vertex smooth; mandibles tipped with black; antennæ black, 17 mm. long; scape ferruginous; medial mesothoracic lobe gibbous, broadly emarginate, strongly rugose; wings stained slightly yellowish, a quadrate fuscous spot beneath the stigma, extending to the subdiscoidal nervure. A fuscous spot at apex of anterior wings, and the basal half of the median cell fuscous; wings showing slight violaceous reflection; legs ferruginous, trochanters ringed above with black; abdomen ferruginous, with an unusually long petiole, length abdomen 8–9 mm.; ovipositor 21 mm. Length 16 mm.

♂.—Black; vertex smooth; face roughened; antennæ black, 10–12 mm. long; scape ferruginous beneath; medial mesothoracic lobe gibbous, emarginate, rugose; wings stained yellowish, showing but slight violaceous reflection; legs ferruginous, trochanters ringed above with black; abdomen ferruginous, banded with black. Length 13–15 mm.

*Habitat*.—Nevada.

Cresson described the species from 2 females and 4 males, the indications are that it varies as much in color as does *occidentalis*, to which it is very closely related.

Types in the collection of the American Entomological Society.

***Pristaulacus pacificus* Cresson.**

1879. *Aulacus pacificus* Cresson, ♀, Trans. Am. Ent. Soc., vii, p. 256

1901. *Pristaulacus pacificus* Ashmead, Ent. News, xii, p. 278.

♀.—Black; vertex smooth, face roughened; antennæ black, 12 mm. long; medial mesothoracic lobe but slightly gibbous, scarcely emarginate, and the transverse striae almost obliterated; wings without violaceous reflection; a fuscous spot beneath the stigma extending to the marginal nervure; the median cell hyaline, but a slight fuscous spot along the transverse medial nervure; legs ferruginous, hind legs darker; abdomen ferruginous, short and robust; ovipositor 15-18 mm. long. Length 12-14 mm.

♂.—Differs only in having the fuscous spots on the wings almost obliterated, and the abdomen banded with black. Length 12-13 mm.

*Habitat*.—Vancouver, Washington.

This species also varies from black to ferruginous. The male is here described from two specimens from Washington.

Types in the collection of the American Entomological Society.

***Pristaulacus fasciatus* Say.**

1829. *Aulacus fasciatus* Say, Contr. Maclurian Lye. to Arts and Sci. Phila., vol. i, p. 67.

1901. *Pristaulacus fasciatus* Ashmead, Ent. News, xii, p. 278.

♀.—Entirely black; everywhere covered with black pubescence; vertex smooth; antennæ black; medial mesothoracic lobe not gibbous, slightly emarginate, transverse rugose; wings entirely violaceous, except for a yellow hyaline band extending beneath the stigma; legs entirely piecous; abdomen short, robust, almost without petiole; ovipositor 6.5 mm. long. Length 14 mm.

*Habitat*.—New Jersey, Pennsylvania, Ohio.

The author has seen but one specimen of this strikingly beautiful species, collected by Mr. Henry W. Wenzel at Da Costa, New Jersey, July 19.

**OLEISOPRISTER nov. gen.**

The anterior margin of the prothorax rounded, without an acute tooth; medial mesothoracic lobe not gibbous; wings hyaline or stained slightly yellowish fuscous; first transverse cubitus interstitial with or close to the first recurrent nervure; hind coxæ normal; tarsal claws with three teeth beneath, the third very small and often scarcely perceptible with a hand glass. See Plate XI, Fig. 8.

Type (*Aulacus*) *firmus*.

Kieffer separated his *Pristaulacus* from *Aulacus* by its having three or more teeth on the tarsal claws, whereas *Aulacus* has but one. But at least of our American species, those having three teeth form a group as equally distinct from those having four, as do those having but one. Therefore, the logical conclusion is to establish a

new genus for those having three teeth, and let *Pristaulacus* remain for those having four, as Kieffer's illustration\* shows. See Plate XI, Figs. 7, 8 and 9.

Mesothorax deeply emarginate. Legs black.....**firmus** Cresson.  
Mesothorax very slightly emarginate.

Length 13.5 mm. Legs black. Apparently but 2 teeth on tarsal claws.

**subfirmus** Viereck, nov. spec.

Length 16 mm. Legs fulvous, femora red.....**resutorivorus** Westwood.

Length 14.5 mm. Feet rufous, femora fuscous.....**abbottii** Westwood.

Length 10 mm. Feet yellow, femora fuscous.....**stigmaternus** Cresson.

### **Oleisoprister firmus** Cresson.

1879. *Aulacus firmus* Cresson, ♀, Trans. Am. Ent. Soc., vii, p. 256.

1901. *Pristaulacus firmus* Ashmead, Ent. News, xii, p. 278.

♀.—Black; covered with fine white pubescence; vertex smooth, face punctulate; antennæ black; medial thoracic lobe not gibbous, emarginate; wings hyaline, a fuscous spot beneath the stigma and on the transverse medial nervure and at the apex of the front wings, which are without violaceous reflection; legs black, tibiae castaneous; abdomen ferruginous, with black markings above, 6.5 mm. long; ovipositor 17 mm. long. Length 14 mm.

*Habitat*.—Colorado, one specimen.

Type in the collection of the American Entomological Society.

See Plate XI, Fig. 8.

### **Oleisoprister subfirmus** Viereck, nov. spec.

“♀.—Mandibles roughened at base, teeth and edges smooth; the rest of the head moderately rugose, tending to transversely striate on the front, smoothest around the ocelli and over to the eyes; scape and antennæ minutely roughened; prothorax roughened, with the exception of the dorso-posterior portion; the dorsal portions of the other thoracic segments coarsely striate; posterior coxæ rugose-punctate; abdomen smooth, as in the other species; ovipositor as long as the body; head and thorax covered with silvery pubescence; the thorax more sparsely than the head, legs covered with very short brownish pubescence; wings sub-hyaline, nervures piceous, a brown stain the width of the stigma extending from the stigma to the cubital nervure, a faint trace of brown stain on each side of the transverse medial nervure and at the apex; eyes, head, thorax, spot at base of the first dorsal abdominal segment, a trace at the apex, greater part of the third and the rest of the abdominal segments black, the remaining space on the abdomen translucent red; posterior legs black; the anterior pairs almost black. Length 13.5 mm.

“Apparently near to *O. firmus* Cresson, from which it differs, however, in the faintly impressed dorsum, the closer arrangement of the ocelli, the uniformly different sculpture and smaller size.

“One female, Riverton, N. J., June 17, 1900; collected by Mr. Chas. W. Johnson,” Henry L. Viereck.

\* Ann. Soc. Ent. Fr., lxxvii, p. 814.



Type in Mr. Viereck's collection.

The author is indebted to Mr. Viereck for contributing the description of this new and interesting species. The third tooth on the tarsal claws is so small as to be perceptible only with the utmost difficulty, but is nevertheless present.

**Oleisoprister resutorivorus** Westwood.

1851. *Aulacus resutorivorus* Westwood, ♀, Trans. Ent. Soc. London., n. ser., vol. i, p. 224.

♀.—Black; griseous pubescent; face very rough, vertex smooth, antennæ black; mesothorax not gibbous, emarginate; wings hyaline, a quadrate fuscous spot beneath the stigma; a very small fuscous spot at the tip of the front wings; legs castaneous, femora rufous; abdomen black, anterior ventral and lateral surface marked with rufous; ovipositor 16 mm. long. Length of whole 16 mm.

*Habitat*.—Canada, New Jersey.

**Oleisoprister abbottii** Westwood.

1843. *Aulacus abbottii* Westwood, ♀, Tr. Ent. Soc. Lond., iii, p. 266.

1901. *Pristaulacus abbottii* Ashmead, Ent. News, xii, p. 278.

"Niger, abdomine versus basin rufo; pedibus rufis, alis striga parva versus basin maculaque pone stigmata fuscis ♀.

"Caput tenuissime punctatum, pubescentia grisea parum indutum; palpi et antennæ nigri; mesothorax transverse striatus, striis anticis magis distantibus; abdomen nigrum, segmenti 1 mi apice et 2 do (apice excepto) rufis; terebra rufa, vaginis nigris apice piceis; pedes rufi, coxis nigris, trochanteribus posticis fuscis, alis pallide flavido hyalinis, striga tenui versus basin apiceque areolæ. 1 mæ submarginalis fusco, stigmate nigro."

"Long. corp. lin. 7, oviduct. lin. 8, expans. alar. lin. 11."

The author here quotes the original description, because the single specimen that he has seen is in too poor condition to describe. It is slightly smaller than Westwood's, and comes from Canada. There are but three teeth on the tarsal claws, so that its position in this group, which the author had suspected before seeing a specimen, is confirmed.

*Habitat*.—Georgia, Canada.

Type in British Museum.

**Oleisoprister stigmaterus** Cresson.

1864. *Aulacus stigmaterus* Cresson. ♀, Proc. Ent. Soc. Phila., iii, p. 134.

1901. *Pristaulacus stigmaterus* Ashmead, Ent. News, xii, p. 278.

♀.—Black; griseous pubescent; vertex smooth, a deep groove extending from the middle ocellus to the antennæ, which are black and 6.5 mm. long; mesothorax not gibbous, emargine, transverse striate; wings hyaline, a subtriangular fuscous spot beneath the stigma, and a fuscous band along the margin at the apex; legs flavous, coxæ and trochanters black, posterior femora castaneous; ab-



domen ferruginous, petiole and posterior segments black; petiole distinct; abdomen 5 mm long; ovipositor 11.5 mm. long. Length 9.5 mm.

*Habitat*.—New Jersey.

Type in the collection of the American Entomological Society.

### **AULACUS** Jurine.

1807. *Aulacus* Jurine, Nouv. Meth. Hym. et. Dipt., p. 89, Taf. 7.

1873. *Aulacostethus* Philippi, Ent. Zeitg. Stettin, Jahrg., 34, p. 302.

Anterior margin of the prothorax rounded, without an acute tooth; medial mesothoracic lobe gibbous, with strongly carinate sides; wings hyaline or stained slightly yellowish fuscous, without a fuscous spot beneath the stigma. First transverse cubitus interstitial with or close to the first recurrent nervure; hind coxæ normal, tarsal claws with one tooth beneath. See Plate XI, Fig. 9.

Posterior coxæ of the ♀ with a medium sized tooth near the apex of the lower margin. Length 9 12 mm . . . . . **rufitarsis** Cresson.

Posterior coxæ of the ♀ with a very small tooth. Length 8 mm.

**minor** Cresson.

### **Aulacus rufitarsis** Cresson.

1864. *Aulacus rufitarsis* Cresson, ♀, Proc. Ent. Soc. Phila., iii, p. 134.

1880. *Aulacus editus* Cresson, ♀, Proc. Ent. Soc. Acad. Nat. Sci. Phil., 1880, p. v.

1880. *Aulacus abdominalis* Cresson, ♀, Proc. Ent. Soc. Acad. Nat. Sci. Phil., p. v.

1883. *Aulacus bilobatus* Prov., ♂, Faun. Ent. du. Can., p. 247.

1901. *Pristaulacus rufitarsis* Ashmead, Ent. News, xii, p. 278.

1901. *Pristaulacus editus* Ashmead, Ent. News, xii, p. 278.

1901. *Pristaulacus bilobatus* Ashmead, Ent. News, xii, p. 278.

♀ ♂.—Black; vertex sparingly, face closely punctulate. Antennæ black, 6–10 mm. long; medial mesothoracic lobe gibbous, broadly not deeply emarginate, transverse striate, lateral angles carinate; wings hyaline or stained slightly yellowish; legs rufous, often darker, especially tibiæ, coxæ and trochanters black; tarsi often flavous; abdomen ferruginous, with more or less black; ovipositor 10–12 mm long. Length 9 12 mm.

*Habitat*.—Vancouver, Washington, Nevada, Canada, Virginia.

The author has not been able to discover any reason for keeping *rufitarsis*, *editus*, *abdominalis* and *bilobatus* separate, so he has followed Dr. Schletterer's example and grouped them together as *rufitarsis*. A fair series of specimens seems to indicate their unity.

Types in the collection of the American Entomological Society.

### **Aulacus minor** Cresson.

1880. *Aulacus minor* Cresson, Proc. Ent. Soc. Acad. Nat. Sci. Phil., v.

1901. *Pristaulacus minor* Ashmead, Ent. News, xii, p. 278.

♀.—Black; vertex less punctured than face; antennæ black, length 6 mm.; wings hyaline; medial mesothoracic lobe gibbous, broadly not deeply emarginate,

side angles carinate; legs ferruginous, tibiæ castaneous; abdomen ferruginous, black at tip; ovipositor 8 mm. long. Length 8 8.5 mm.

♂.—Differs only in the abdomen being mostly dark.

*Habitat*.—Nevada.

Types in the collection of the American Entomological Society.

### **PAMMEGISCHIA** Provancher.

1883. *Pammegischia* Prov., Fn. Ent. du. Can. Hym., ii, p. 751.

1889. *Aulacus* Schletterer, Ann. d. k. k. Nath. Hofm. Wien., iv, p. 489.

Head subtriangular, very broad behind the eyes; first cubital cell receiving the first recurrent nervure near the middle; nervures of the posterior wings obliterated, except the costal and a trace of the anal; posterior coxæ of the female greatly prolonged internally; tarsal claws with no teeth beneath. See Plate XI, Fig. 10.

This genus was founded on an interesting unique female collected by P'Abbé Burque in Quebec.

Black; legs black; first segment of abdomen red; length 7.5 mm.

**xiphydriæ** Ashmead.

Black; legs yellow; abdomen partly ferruginous; length 5 mm.

**pallipes** Cresson.

Ferruginous. Legs dusky brown to honey-yellow. Length 4 mm.

**lovei** Ashmead.

Yellow, including legs and abdomen.

Length 6.5 mm., wings with the marginal and first transverse nervures intersecting in or close to the stigma ..... **ouelletii** nov. spec.

Length 10 mm., wings with the marginal nervure receiving the first transverse cubitus distant from stigma..... **burquei** Provancher.

### **Pammegischia xiphydriæ** Ashmead.

1901. *Pammegischia xiphydriæ* Ashmead, ♀, Ent. News, vol. xii, p. 278.

♀.—“Length 7.5 mm.; ovipositor about two-thirds length of the abdomen. Black, with the first segment of the abdomen red, the second joint of the front and middle trochanters and the bases of their tibiæ testaceous, the remainder of the legs black (all, however, are broken off about the middle of the tibiæ, so that I am not quite certain that the tips of the tibiæ and the tarsi are black). The head is quadrate, above smooth and highly polished, with only a few scattered punctures; in front, below the front ocellus to the insertion of the antennæ, it is transversely rugulose; while beneath the antennæ, except the lower inner angles of the malar space, which are smooth and polished, it is closely, irregularly punctate. The mandibles are black, with a rufo-piceous tinge basally. Palpi fuscous. The thorax is rugosely punctate, the mesonotum with numerous transverse ridges and complete parapsidal furrows. Wings hyaline, or at most only faintly tinged, the stigma and veins being black or brown-black, the first recurrent nervure being received by the second cubital cell only a little beyond the middle, while the third cubital cell is more or less divided into two by a spurious stump of a vein, which originates from the cubitus a little before the apex of the second

recurrent nervure. All the coxæ are black and rugulose, the hind pair being elongated and produced beneath into a triangular process that extends far beyond the insertion of the trochanters. The abdomen is highly polished, impunctate, except at its extreme base, and shaped as in *Aulacus* or *Pristaulacus*, only that it is not so distinctly petiolate, the first segment occupying fully half its whole surface."

*Habitat*.—Saranac Inn, New York.

*Host*.—Hym., *Xiphydria provancheri* Cresson, living in birch twigs (Dr. E. P. Felt).

*Type*.—Cat. No. 5782, U. S. Nat. Mus.

The author has not seen this species.

### ***Pammegischia pallipes* Cresson.**

1879. *Aulacus pallipes* Cres., ♂, Proc. Ent. Sec. Acad. Nat. Sci. Phil., 1879, p. xvii.

1901. *Pammegischia weedi* Ashmead, ♂, Can. Ent., xxxiii, p. 301.

♂.—"Small, black; head subglobose, broad behind the the eyes, face beneath antennæ, spot beneath eyes, mandibles, except tips, antennæ and legs, except coxæ, yellow; antennæ nearly as long as the body, dusky at base above; mesothorax very feebly rugose, rounded in front, not emarginate; sides of pleura stained with dull yellowish; wings hyaline, nervures and stigma ochraceous; abdomen robust, about as long as head and thorax, slender at base, first and second segments, except base and the venter, ferruginous." Length 5 mm.

*Habitat*.—Massachusetts.

Type in the collection of the American Entomological Society, a single male, is in such a bad state of preservation, that the author has been obliged to quote Mr. Cresson's description instead of re-describing it.

### ***Pammegischia lovei* Ashmead.**

1901. *Pammegischia lovei* Ashmead, ♀, Can. Ent., xxxiii, p. 301.

♀.—"Length 4 mm. Ferruginous; eyes, mesonotum, base of metathorax, hind coxæ toward apex, the flagellum and the ovipositor, which is a little longer than the abdomen, brown or brown-black; all femora and the hind tibiæ, except at base, dusky, rest of legs honey-yellow. Wings hyaline, the subcostal vein brown, the stigma and the rest of the veins pale ferruginous."

*Habitat*.—Palisades, New Jersey, collected in May by E. E. Love.

*Type*.—Cat. 5857, U. S. Nat. Museum.

The author has not seen this species, but he suspects that it may be the ♀ of *Pammegischia* (*Aulacus*) *pallipes* Cresson.

### ***Pammegischia onelletii* nov. spec.**

♂.—Yellow, glabrous; head globular, smooth, mandibles tipped with black; antennæ yellow, 6 mm. long; medial mesothoracic lobe not gibbous nor emarginate, slightly rugose; wings hyaline, with violaceous reflection; marginal nervure receiving the first transverse cubitus within or close to the stigma, third dis-

coidal cell very long and narrow; first cubital cell receiving first recurrent nervure at or near the middle; hind wings without distinct venation; legs yellow, tarsal claws with no teeth beneath; propodeum dark, partially black; abdomen reddish yellow, 6.5 mm. long.

*Habitat*.—Canada.

I take pleasure in dedicating this species to Mr. C. J. Ouellet, of Montreal, who collected the type (one male) at Joliette, P. Q., Canada, July 11, 1901. It is now in the author's collection. See Plate XI, Fig. 5.

***Pammegischia burquei* Provancher.**

1853. *Pammegischia burquei* Provancher, ♀, Fn. Ent. du. Can. Hym., ii, p. 752.

1889. *Aulacus burquei* Schletterer, ♀, Ann. d. k. k. Nath. Hofm. Wien., iv, p. 540.

♀.—Entirely ochraceous; head glabrous, occiput polished; mesothorax scarcely gibbous, not emarginate, transverse striate; wings hyaline, nervures brownish yellow; marginal nervure receiving the first recurrent nervure distant from the stigma; petiole scarcely distinct; abdomen short; antennæ 7 mm. long. Length 10 mm.

*Habitat*.—Canada, one female collected in St. Hyacinth, Quebec, by l'Abbé Burque.

Type in Parliament Museum, Quebec. See Plate XI, Fig. 6.

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EXPLANATION OF PLATE XI.

Fig. 1. Wings of *Evania appendigaster*.

Fig. 2. Wings of *Hyptia*.

Fig. 3. Wings of *Gasteruption*.

Fig. 4. Wings of *Aulacus rufitarsis*.

Fig. 5. Wings of *Pammegischia ouelletii*.

Fig. 6. Wings of *Pammegischia burquei*.

Fig. 7. Tarsal claw of *Pristaulacus occidentalis*.

Fig. 8. Tarsal claw of *Oleisoprister firmus*.

Fig. 9. Tarsal claw of *Aulacus rufitarsis*.

Fig. 10. Tarsal claw of *Pammegischia burquei*.